



Questions & Answers

Surface Water as a Source of Public Drinking Water

What is the best source of water for a public drinking water system?

Without extensive treatment provisions, the use of a properly constructed well that taps a protected groundwater aquifer is the safest source of drinking water. A connection with another public water system that meets all drinking water standards is also a good option. Water that is open to the atmosphere and vulnerable to surface water runoff is not safe to drink without complete treatment. Sources at risk include lakes, rivers, streams and improperly constructed springs. Shallow or poorly constructed wells may also be unsafe.

Why do surface water sources need special treatment to make them safe?

Surface water sources are open to contamination from human and animal waste and other pollution. Consequently, they are particularly susceptible to contamination by organisms such as bacteria, viruses, and parasites that can cause serious illness and disease. Two parasites that cause waterborne illness are *Giardia* and *Cryptosporidium*. *Giardia* is the cause of an illness commonly known as “back packer’s disease.” *Cryptosporidium* is the organism that caused over 400,000 illnesses and 100 deaths in Milwaukee, Wisconsin in 1993.

What special requirements are surface water systems subject to?

Public water systems with surface water sources are subject to extensive federal and state requirements to protect public health. Both Group A and Group B surface water sources are subject to requirements identified in Part 6 of the Washington State Board of Health drinking water regulations, Chapter 246-290 WAC. These regulations comply with the federal Surface Water Treatment Rule (SWTR) and include filtration, disinfection, operating, monitoring, and reporting requirements.

What treatment is required for surface water sources?

Studies of waterborne disease outbreaks have shown that properly designed and operated treatment systems, which include both filtration and disinfection, are effective in preventing waterborne illness.

If surface water is not adequately treated, what is a public water system’s responsibility to inform the people who drink it?

Everyone who might use the water needs to be told that it is not safe to drink. The system must give written notice to every user and repeat it every three months. All new users must be informed immediately.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Where can I get help to upgrade my system?

Department of Health staff are available to answer questions and provide further technical assistance on surface water issues. Surface water treatment systems must be designed by a licensed professional engineer with specific experience in this type of water treatment. (See “More information and assistance” below.)

Once I get the necessary treatment installed, how can I make sure the system runs properly?

To be effective, a treatment system must be properly operated and maintained. State certification for this type of operation and maintenance is required. In some areas of the state there are also certified operators available to perform these services under contract.

More information and assistance

Department of Health, Division of Drinking Water

- Ethan Moseng, Surface Water Program Coordinator, (360) 236-3562 or 1-800-521-0323
- Regional Office surface water contacts:
 - Eastern Regional Office, Mike Wilson (509) 456-3186
 - Northwest Regional Office, Nancy Feagin (253) 395-6765
 - Southwest Regional Office, Jim McCauley (360) 664-8734.
- Operator certification hotline, 1-800-525-2536: Information on available training, how to become a certified operator, and certified contract operators.
- Web site: <http://www.doh.wa.gov/ehp/dw/>. Provides access to publications on *Cryptosporidium* and other contaminants, information on how to hire an engineer, and many other resources. Also includes links to other sites such as the federal Environmental Protection Agency (EPA) and the American Water Works Association (AWWA.)
- Toll-free number: 1-800-521-0323

US Environmental Protection Agency

Safe Drinking Water Hotline 1-800-426-4791